CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

NABL - Accredited Laboratory as per ISO / IEC-17025 :2005

T-2377

CTCE/BBMP/W.No.15/NS/CSR-4/826/CC Solid Block/2015-16 : 25.04.2015

TEST REPORT ON SOLID CONCRETE BLOCKS

...ner	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
...cy	: **Mr. N. Shivananda,** No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.
...ne of the Work	: Improvements & Construction of CC road, drain & RCC Culverts at Kempegowda Nagar 2nd Main & Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.
...rence	: BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
...ple Received on	: 20.04.2015
...te of Testing	: 25.04.2015
...e of Blocks	: 400mm x 200mm x 200mm
...ross Sectional Area	: 80000 mm^2
...echnical Reference	: IS: 2185 (Part I) - 2005
...o. of Blocks Tested	: 08

Sl.No.	Block ID	Wt. in Kg	Failure load (KN)	Compressive strength (N/mm^2)	Requirement as per IS 2185 (Part I) - 2005
1	Block 1	34.66	256.9	3.21	Minimum required Compressive Strength of Individual Units 3.20 N/mm^2
2	Block 2	35.26	257.8	3.22	
3	Block 3	34.58	258.6	3.23	
4	Block 4	36.96	259.6	3.25	
5	Block 5	34.99	260.3	3.25	
6	Block 6	35.22	261.2	3.27	
7	Block 7	36.98	262.3	3.28	
8	Block 8	35.65	263.5	3.29	

*Information is furnished by the Customer/Representative.

Note:

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VISHWANATH .C
Quality Manager

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
...@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.15/NS/WMM/Gradation/2015-16

20.05.2015

GRADATION FOR WMM
MORTH TABLE-400-11

Customer : **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.

Agency : **Mr. N. Shivananda,**
No.35, 2nd Cross, 1st A Main Road, defiance Colony, Bagalagunte, Bangalore.

Name of Work : Improvements & Construction of CC road, drain & RCC Culverts at Kempegowda Nagar 2nd Main & Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015

Date of Testing : 20.05.2015

Material : WMM

Sample Location : WMM Mix Plant

Oven Dry Wt (gm): **5000**

Is Sieve Size in mm	Weight Retained (gm)	Cumulative Weight Retained (gm)	Cumulative % of Retained	Cumulative % of Passing	Spec.Limits
53	0	0	0	100	100
45	85	85	1.7	98.3	95-100
22.4	1525	1610	32.2	67.8	60-80
11.2	680	2290	45.8	54.2	40-60
4.75	810	3100	62.0	38.0	25-40
2.36	890	3990	79.8	20.2	15-30
0.600	410	4400	88.0	12.0	8-22
0.075	500	4900	98.0	2.0	0-8

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M/s. Civil-Tech Consultants & Engineers
23/14, 7th Cross, 3rd Stage,
4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

NAME OF WORK :

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Job No.: CTCE/BBMP/W.No.15/NS/WMM/AIV/2015-16

20.05.2015

Aggregate Impact Value
IS: 2386 Part IV

Customer	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	**Mr. N. Shivananda,** No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.
Name of the Work	Improvements & Construction of CC road, drain & RCC Culverts at Kempegowda Nagar 2nd Main & Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.
Reference	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
Source / Location	WMM Plant
Type of Mix	Wet Mix macadam
Date of Testing	20.05.2015

Sl No.	Details	Trial No. 1	Trial No. 2	Average
1	Total weight of aggregate sample filling the cylindrical measure = W_1 g	379	380	
2	Weight of agregate passing 2.36 mm sieve after the test = W_2 g	78	79	
3	Weight of aggregate retained 2.36 mm sieve after the test = W_3 g	301	301	
4	Aggregate Impact value = percent fines	20.58	20.79	20.68
	100* (W_2/W_1)%			

Comments:

→ Maximum allowable Aggregate Impact value for Wet mix Macadam is 30%

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4th Block, Shakthiganapathinagara,
Basaveshwaranagar,
Bangalore-560079.

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E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.15/NS/WMM/S-T/2015-16

20.05.2015

DETERMINATION OF FLAKINESS INDEX & ELONGATION INDEX OF COARSE AGGREGATES

Customer	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
Agency	**Mr. N. Shivananda,** No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.
Name of Work	Improvements & Construction of CC road, drain & RCC Culverts at Kempegowda Nagar 2nd Main & Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.
Reference	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
Technical Reference	IS 2386(Part 1) 1963 (RA 2011)
Type of Mix	Wet Mix Macadam
Date of Testing	20.05.2015

Result : Flakiness Index = **12.31%**

Elongation Index = **13.36%**

Result : Combined Flakiness & Elongation index **25.67%**

Comments:

Maximum allowable Flakiness & Elongation Index for Wet Mix Macadam is 30%

Note:

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23/14, 7th Cross, 3rd Stage,
4th Block, S[illegible]napathinagara,
Basaveshwaranagar,
Bangalore-560079.

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T-2377

CTCE/BBMP/W.No.15/NS/CSR-4/820e/Pre slab/2015-16 20.05.2015

TEST REPORT ON CONCRETE CORE (PRECAST SLAB)

Name of Client	:	**Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
Name of Agency	:	**Mr. N. Shivananda,** No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte, Bangalore.
Name of work	:	Improvements & Construction of CC road, drain & RCC Culverts at Kempegowda Nagar 2nd Main & Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.
Reference	:	BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
Technical Reference	:	IS:516-1959 (Reaffirmed 2008), SP-24:1983.
Sample ID	:	Precast Slab
Sample received on		15.05.2015
Date of Testing	:	20.05.2015
Grade of Concrete	:	M_{20}

Sl. No.	Dia of Core D (mm)	Height of Core H (mm)	Core Wt (Kg)	Density of Core (kg / m^3)	H / D	Correction factor (Based on H/D)	Failure Load (kN)	Core Strength (N/mm^2)	Correction Factor for the Dia. (Strength of the Core x 1.08)	Corrected Cylinder Compressive Strength (N/mm^2)	Equivalent Cube Compressive Strength (N/mm^2)
1	50.00	77.00	0.386	2553.09	1.54	0.955	32.35	16.48	17.79	16.99	21.24
2	50.00	79.00	0.397	2559.37	1.58	0.960	32.75	16.68	18.01	17.29	21.62
3	50.00	80.00	0.408	2597.41	1.60	0.965	33.50	17.06	18.43	17.78	22.23

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VISHWANATH .C
Quality Manager

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಧಿಯಂತರರು
ಟಿ.ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

#23/14, 7th Cross, 3rd Stage, 4th Block, Shakthi Ganapathi Nagara, Basaveshwaranagar, Bangalore-79.
Tele Fax : 23223227, Website : www.civiltechconsultants.com
E-mail : vishwanath.ia@civiltechconsultants.com / info@civiltechconsultants.com

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Job No.: CTCE/BBMP/W.No.15/NS/CSR-4/820e/CUBE/2015-16 25.05.2015

TEST REPORT ON CONCRETE CUBES

* Customer	: **Asst. Executive Engineer,** T. Dasarahalli Sub Division, BBMP, Bangalore.
* Agency	: **Mr. N. Shivananda,** No.35, 2nd Cross, 1st A Main Road, Defiance Colony, Bagalagunte,
* Name of the work	: Improvements & Construction of CC road, drain & RCC Culverts at Kempegowda Nagar 2nd Main & Cross road in Dasarahalli Ward No.15, BBMP, Bangalore.
* Reference	: BBMP/DZ/AEE/TDSD/PR/2015-16 Dated: 20.04.2015
* Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
* Grade of Concrete	: M_{15}
Compressive Strength as o	: 28^{th} day
Sample Received on	: 27.04.2015

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	27.04.2015	25.05.2015	8.152	352.3	15.66
2	27.04.2015	25.05.2015	8.369	375.4	16.68
3	27.04.2015	25.05.2015	8.200	362.5	16.11

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VISHWANATH. I.A.
Chief Executive Officer

ಸಹಾಯಕ ಕಾರ್ಯಪಾಲಕ ಅಭಿಯಂತರರು
ಟಿ.ದಾಸರಹಳ್ಳಿ ಉಪ-ವಿಭಾಗ
ಬಾಗಲಗುಂಟೆ, ಬಿಬಿಎಂಪಿ
ಬೆಂಗಳೂರು

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